

Hepatitis Headlines

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Viral Hepatitis Surveillance and Prevention Unit, Michigan Department of Community Health

www.michigan.gov/hepatitis

Safe Injection Knowledge in LTCFs

MDCH Viral Hepatitis Unit has been working to raise awareness of CDCs safe injection and assisted blood glucose monitoring guidelines. Initially we targeted these efforts at Ambulatory Surgical Centers (ASCs). The information gathered through survey's conducted with ASCs led to the development of a webinar entitled 'Injection Safety: Preventing Viral Hepatitis Infections'.

In December 2013, we began promoting the webinar to Long Term Care Facilities (LTCF). Those that viewed the webinar were asked to complete both a pre- and post-evaluation survey. The survey included six true false questions on injection safety topics.

In the post-webinar survey we saw healthcare worker knowledge of safe injection practices rise and incorrect responses decrease. We hope this increase in knowledge corresponds to safer healthcare for Michigan patients. A full report of the findings will be posted to our website.

-Chardé Fisher



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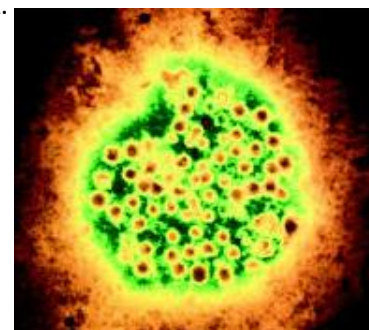
Hepatitis A Outbreak among Adults with Developmental Disabilities in Group Homes - Michigan 2013

On April 24, 2013, a resident of a group home (GH) for adults with disabilities in southeast Michigan (GH-A) was diagnosed with hepatitis A and died 2 days later of fulminant liver failure. Four weeks later, a second GH-A resident was diagnosed with hepatitis A. None of the GH-A residents or staff had been vaccinated against hepatitis A. Over the next 3 months, six more cases of hepatitis A were diagnosed in residents in four other Michigan GHs. Three local health departments in Oakland, Macomb, and Tuscola Counties were involved in case investigation and management, including administration of postexposure prophylaxis (PEP). Serum specimens from seven cases were found to have an identical strain of HAV genotype 1A.

Each GH provides 24-hour care and supervision for up to six residents, who share rooms and bathrooms. Residents have developmental and/or physical disabilities; some are nonverbal or minimally communicative, and some require assistance with toileting. The average staff-to-resident ratio is 2:1. Residents attend various programs at off-site work sites (WSs); such as vocational centers for the disabled, restaurants, and/or hotels.

A health care worker (HCW-1), who was employed at GH-A, GH-B, and WS-B, was identified as a common link for the first six cases. HCW-1 did not report symptoms and had not previously received the hepatitis A vaccine. Five cases were residents of the GHs where HCW-1 worked, and HCW-1 cared for case 4 while at WS-B. Case 8 attended a special needs camp in Tuscola County in July, 2013. Tuscola County Health Department provided education to staff working at the camp. Campers were notified of their potential exposure and told to seek care if they developed symptoms suggestive of HAV infection.

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Michigan Department
of Community Health



Rick Snyder, Governor
Nick Lyon, Director

MDSS Hepatitis Cases



The MDCH Viral Hepatitis Unit has been working feverishly on hepatitis cases in MDSS and we wanted to make sure LHDs were aware of our efforts in the event they see our names in the MDSS audit trails. Here is what we've been working on:

- Removal of duplicate chronic HBV and HCV cases that were previously reported
- Transfer of HCV laboratory information into the Lab Section of the case detail form
- Reclassifying acute HBV and HCV cases that do not meet the CDC case definition
- Helping MDOC investigators move 2014 cases to completed follow-up

The first three activities will continue into 2015 and will be conducted on a monthly or quarterly basis. If there are questions or concerns about any of these activities please feel free to contact the MDCH Viral Hepatitis Unit. Please keep an eye out for the new version of MDSS coming soon!

-Geoff Brousseau



Hepatitis A Virus continued from page 1



In total, eight GH residents in five adult GHs developed hepatitis A. None of the residents and only eight (14%) of 57 HCWs in the five group homes had previously received hepatitis A vaccine. Of the 261 contacts who warranted PEP, 225 (86.2%) were confirmed to have received immunoglobulin (IG) or hepatitis A vaccine or both. Illness onset dates ranged from April 16 to July 23, 2013. Ages of patients ranged from 42 to 61 years, with an average age of 48 years. GH attack rates, calculated as the

number of cases per home divided by the number of susceptible GH residents, ranged from 16.7% to 60.0% among the five homes; the attack rate among susceptible residents in all five homes was 27.6%. At GH-A and GH-B, where HCW-1 worked, the attack rates were 33.3% and 60.0%, respectively. No staff reported any symptoms or previous diagnosis with hepatitis A. It was noted that HCW-1 did not always use gloves when assisting residents with toileting. Given the multiple sites of employment and lack of hand hygiene of HCW-1, HCW-1 may have played a role in transmitting the virus among cases 1 to 6. The connection to the outbreak for cases 7 and 8 is more indirect. The two residents of GH-D and the two residents of GH-E, who had exposures to confirmed hepatitis A cases at WS-B and WS-D, respectively, might have introduced HAV into their group homes.

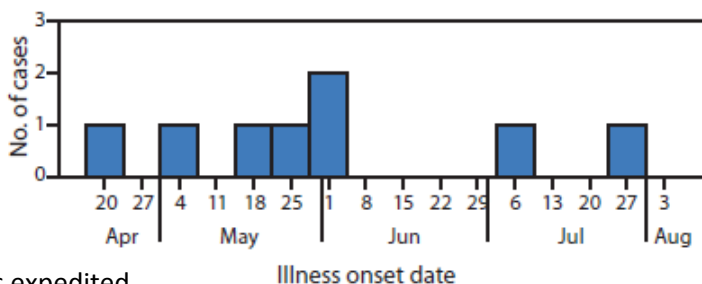
LHDs in Michigan are responsible for having a hepatitis A outbreak response plan that pre-identifies sources of hepatitis A vaccine and IG in the community. In this outbreak, although on-hand IG supplies at

the pre-identified hospitals expedited

administration of PEP, they were not sufficient to provide PEP for such a large cohort. Hospital pharmacies responded quickly to order IG and vaccine, and received shipments overnight from their suppliers. It is likely that because of the rapid and coordinated public health response this hepatitis A outbreak in group homes involved only five of 370 homes in the two affected counties. Before the outbreak, the estimated hepatitis A vaccination coverage rate among staff and residents in the affected homes was only 6%, which is thought to be typical of vaccination coverage in other homes in the two counties. This outbreak raises the question of whether adult residents and staff of group homes, in light of their susceptibility, should be considered a high risk group for HAV transmission and a group for whom pre-exposure vaccination should be recommended.

The full report can be found in the [February 20, 2015 issue of CDC's MMWR](#).

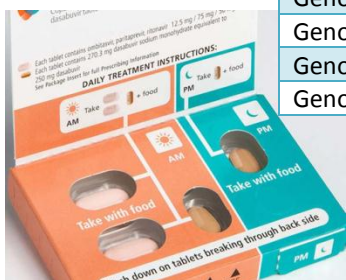
FIGURE 1. Number of laboratory-confirmed hepatitis A cases among residents of group homes, by illness onset date — Michigan, April–July 2013



-Susan Bohm

Viekira Pak for the Treatment of HCV GT1 Infection

In December of 2014 Abbvie received FDA approval for Viekira Pak to treat persons infected with genotype 1 Hepatitis C Virus (HCV) in 12-24 weeks without interferon. Sustained Virologic Response (SVR) with Viekira Pak was measured to be 95-100% in six phase 3 clinical trials and was successful at treating both HIV/HCV co-infected patients and liver transplant recipients. Weight-based dosing of Ribavirin is still necessary in some cases (See Table). One potential drawback of this regimen therefore, is the “pill burden” which can be 9-10 pills per day in contrast to regimens from Gilead that are only one pill per day. Predictably, the number of drugs in Viekira Pak increases the chances of drug interactions. The 12-week sticker-price for treatment with Viekira Pak is \$83,300 which is less than Gilead’s Harvoni (\$94,500) and Sovaldi (\$84,000).



Patient Population	Treatment	Duration
Genotype 1a, without cirrhosis	Viekira Pak + Ribavirin	12 weeks
Genotype 1a, with cirrhosis	Viekira Pak + Ribavirin	24 weeks
Genotype 1b, without cirrhosis	Viekira Pak	12 weeks
Genotype 1b, with cirrhosis	Viekira Pak + Ribavirin	12 weeks

Competition in the HCV treatment market has led to some interesting developments. Namely, deals signed between the pharmaceutical companies and pharmacy benefit managers (PBM), which negotiate drug prices for employers and health plans. Gilead and Abbvie have

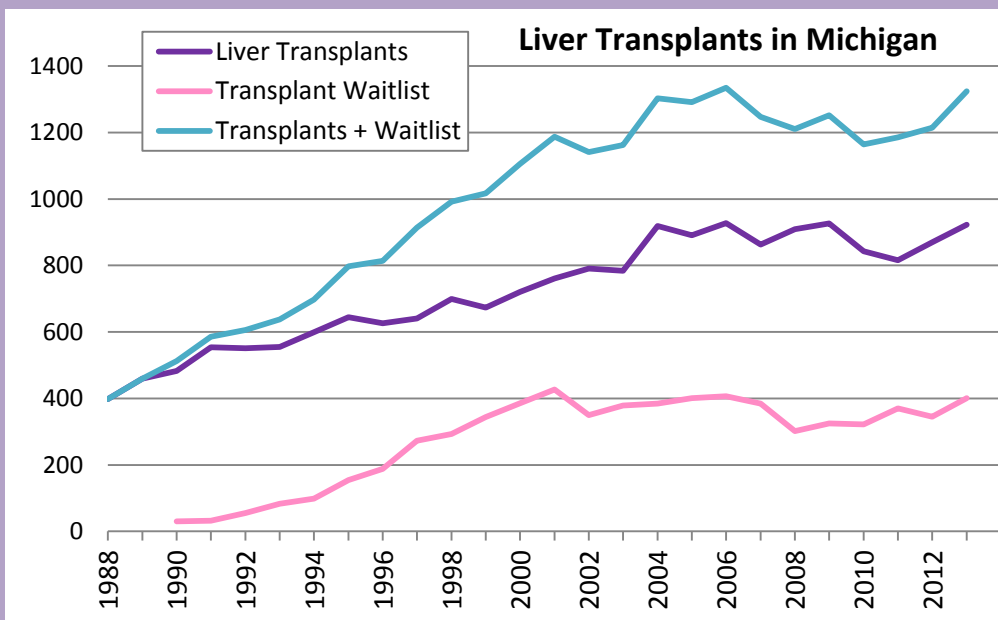
offered their drug(s) at reduced cost to PBMs in exchange for exclusive or preferred status on their drug formularies. **Abbvie signed a deal with the nation’s largest PBM, Express Scripts**, and Gilead followed-suit by inking agreements with **CVS, Aetna, Anthem, Humana, Cigna**, and **EnvisionRx**. With these exclusivity or preferred formulary agreements, clients could only receive the competitor’s product with an exception. And while the discounted prices have not been disclosed, it is believed that they could be **30-50% off the sticker-price**. Hopefully these lower drug prices will result in greater drug access for people infected with HCV.

-Joe Coyle



Fast Facts: Liver Transplants in Michigan

Data below, from the United Network for Organ Sharing (UNOS), show the number of liver transplants and the end-of-year liver transplant waitlist in Michigan per year. UNOS has data on every organ donation and transplant event occurring in the U.S. since October 1, 1987 and is currently being utilized by all of the nation's organ transplant programs, organ procurement organizations, and histocompatibility (tissue typing) laboratories.



The data show a marked increase in liver transplants and the number of Michiganders awaiting a liver transplant. **Hepatitis C Virus is responsible for the majority of liver transplants in the US.** Over the course of decades, liver-related manifestations of chronic HCV infection are likely to arise. That, at least in part, explains the dramatic increases observed in the Michigan UNOS data.

-Joe Coyle

CDC MMWR: HCV Infections Associated with Healthcare

Unfortunately, reports of healthcare-associated hepatitis C virus (HCV) transmission continue to surface. The [February 27, 2015 issue of the CDC's MMWR](#) highlighted two reports of HCV transmission during surgical procedures. These cases stress the importance of public health surveillance, reporting of unusual events to state health authorities, and in initiating investigations of possible viral hepatitis HAIs.



The first HCV transmission occurred in New Jersey in 2010, when a female healthcare worker developed an acute hepatitis C infection after undergoing a procedure at the same facility where she worked. Following the New Jersey Department of Health's investigation the transmission event was traced to an anesthesiologist who treated an HCV-infected patient immediately before the index patient. The anesthesiologist moved an assigned cart from patient to patient throughout the day. While the exact method of transmission was not determined, transmission may have occurred because: 1) there were no policies in place regarding cleaning or disinfecting the cart between patients, or 2) syringes, needles or single-use vials may have been re-used when the anesthesiologist administered propofol to both the source and the index patient.

The second case occurred in Wisconsin in 2011. The report of a kidney transplant recipient with a rare genotype 4 HCV infection triggered an investigation by the Wisconsin Division of Public Health into possible healthcare-associated transmission. An HCV-infected source patient was found to be a fellow transplant recipient who received a transplant at the same time as the index patient in an adjoining operating room. The kidneys for both patients were kept in the same perfusion machine at the same time. It's hypothesized that the perfusion machine was contaminated with the source patient's blood when a healthcare worker removed the first kidney from the machine to transplant into the source patient. The perfusion machine was then wheeled into the adjacent OR, where the second kidney was removed from the then HCV-inoculated machine and transplanted into the index patient.

In both these cases, contaminated equipment is implicated as the mechanism of healthcare transmission of HCV, highlighting the need for continued emphasis of infection prevention measures in healthcare settings. Public health disease surveillance serves a critical role in sounding the alarm that an HAI may have occurred. When viral hepatitis cases are discovered that are suspicious for healthcare transmission, please notify local and state public health agencies for further investigation.

-Kim Kirkey

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Save the Date

3/27 – [MI Epi Conference](#)

4/2 – [World TB Day Conference](#)

5/14 – [MDCH CD Conference](#)

6/14-6/18 – [CSTE Conference](#)

10/7-10/8 – [MI Premier Public Health Conference](#)

10/8-10/9 – [MSIPC Fall Conference](#)

Sep 21/22 – [International Conference on Viral Hepatitis](#)

Week of Sep 21st –
[HCV Advocate training in Kzoo and Flint \(Details to come\)](#)

Helpful Links

www.michigan.gov/hepatitis

www.michigan.gov/hepatitisb

www.michigan.gov/cdinfo

www.michigan.gov/hai

[CDC Hepatitis](#)

[Know More Hepatitis Campaign](#)

[Know Hepatitis B Campaign](#)

[CDC Hepatitis Risk Assessment](#)

[Hepatitis A](#)

[Hepatitis B](#)

[Hepatitis C](#)

[USPSTF](#)

[AASLD](#)

[Institute of Medicine Report](#)

[One and Only Campaign](#)

